UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,249	08/17/2001	Yoshinori Sugahara	018656-239	2733

7590   04/05/2005

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EXAMINER
DIVINE, LUCAS

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/931,249	SUGAHARA, YOSHINORI
	Examiner	Art Unit	
	Lucas Divine	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _17 August 2001_.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-12_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-12_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _17 August 2001_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☒ All b) ☐ Some * c) ☐ None of:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _10/17/01_.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

include the following reference character(s) not mentioned in the description: **22**. Corrected

drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add

the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in

reply to the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version of the

sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing

date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities: a space should be

inserted between '**generator**' and '**24**' on page 7 paragraph 20 line 4.

        Appropriate correction is required.

Claim Rejections - 35 USC § 103

        The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (US 5859954) and McIntyre (US 6690478).

Toda teaches **a print object converter (102) comprising:**

an intermediate data generator (CPU 109 [col. 4 lines 42-44] generates intermediate data such as intermediate -language-data [Fig. 2] and multiple-valued-image-intermediate-language-data [Fig. 6]; col. 5 lines 15-19) **for generating intermediate data of a print object to be printed** (as shown in Fig. 2, the intermediate-language-data is intermediate data of data print object 201 that will be printed by printer engine 110 [Fig. 1]);

a classification table generator (CPU [col. 4 lines 42-44] generates classification tables shown in Fig. 3A 3B 5A 5B) **for generating an object classification table of the print object** (classification tables classify objects within the print data object, such as objects 3013 [5023], 3014 [5024], and others shown in the figures, these objects are classified according to their sizes, how they overlap compared to other objects and classification data shown in the figures; col. 6 lines 15-18) **in parallel with the generation of the intermediate data** (CPU 109 can handle multiple processes concurrently, thus in parallel, further, Fig. 7 shows multiple steps in the generation of final compressed-image-intermediate-language data 305 that can take place while the classification takes place using rectangle [such as rectangle 5026] data 304);

a recording device (management RAM 105) **for saving the intermediate data** (col. 5 lines 19-21, wherein intermediate data is stored in RAM 105) **and the object classification table** (col. 6 lines 22-24, wherein object registration tables are stored in RAM 105);

an output device for outputting the PDL data to a printer (interface 108 shown in the

print object converter 102 transfers data to the printer engine 110, Fig. 1).

While Toda teaches a printing system for analyzing print objects and determining the best

way to print them, Toda does not expressly teach a PDL selector for selecting one PDL from

among a plurality of PDLs using the object classification table; or a PDL data generator

for generating PDL data from the intermediate data in the selected PDL.

McIntyre also teaches a printing system for analyzing print objects to determine the best

way to print them, including a PDL selector (control driver 104) for selecting one PDL from

among a plurality of PDLs (the control driver 104 [Fig. 1] selects the appropriate and

corresponding PDL for the print object [step 308 of Fig. 3 as well as step 312]; col. 3 lines 18-

20) using the object classification table (Fig. 2 shows a PDL registry table which holds

classifications for print objects); and

a PDL data generator for generating PDL data from the print data in the selected

PDL (control driver 104 further converts the incoming data to the PDL for producing an output

page; col. 3 lines 20-22).

It would have been obvious to one of ordinary skill in the art to combine the positive

aspects of these inventions (selectively analyzing specific objects in print data & choosing the

best data format for a printer) into a single print controller (one that uses the analyzed specific

objects to choose the best data format for a printer). The motivations for doing so would have

been to more closely make formatting decisions for printers by analyzing specific objects to

select a more correct output format and thus produce a more correct print output. McIntyre

teaches choosing the appropriate PDL output data type that is best corresponding to the detected

incoming data (col. 5 lines 20-30), and so thus by adding the features of Toda, the system would

more closely analyze the content of incoming data.

Regarding claim 2, which depends from claim 1, McIntyre further teaches **a PDL**

decision table (Fig. 2) that in the combined system would be **compared** to the analyzed print

data in McIntyre, thus the **object classification table** of Toda when the systems are combined, to

select the appropriate PDL.

Regarding claim 3, which depends from claim 1, McIntyre further teaches **PDL selector**

selects one PDL from among a plurality of PDLs depending on the operating environment

of the computer (in step 312 [Fig. 3], after a PDL name is selected, a version must be selected

from a plurality of PDLs with different versions [for example 208 of Fig. 2], if a comparable

revision of PDL can be determined, the latest PDL revision is selected [step 406, Fig. 4], wherein

the latest PDL revision depends on the operating environment of the computing device [how up-

to-date the operating environment is]; col. 5 lines 58-60 and col. 6 lines 8-10).

Regarding claim 4, the functional elements of apparatus claim 1 perform all of the

method steps of method claim 4. Therefore, method claim 4 is rejected for the same reasons of

obviousness as stated in the rejection of apparatus claim 1.

Regarding claim 5, which depends from claim 4, the functional elements of apparatus

claim 2 perform all of the method steps of method claim 5. Therefore, method claim 5 is

rejected for the same reasons of obviousness as stated in the rejection of apparatus claim 2.

Regarding claim 6, which depends from claim 4, the functional elements of apparatus

claim 3 perform all of the method steps of method claim 6. Therefore, method claim 6 is

rejected for the same reasons of obviousness as stated in the rejection of apparatus claim 3.

Regarding claim 7, the method steps claimed in method claim 4 are the same as the

program steps of program (stored on a computer-readable medium) of claim 7. Further,

McIntyre teaches that executable instructions to implement the system are stored in program

memory 506 (see Fig. 5) and executed by execution unit 502; col. 6 lines 37-40, thus the system

can be implemented as program steps. Therefore, the program steps of claim 7 are rejected for

the same reasons as stated in the rejection of the method steps in claim 4.

Regarding claim 8, which depends from claim 7, the method steps claimed in method

claim 5 are the same as the program steps of program (stored on a computer-readable medium)

of claim 8. Therefore, the program steps of claim 8 are rejected for the same reasons as stated in

the rejection of the method steps in claim 5.

Regarding claim 11, which depends from claim 7, the method steps claimed in method

claim 6 are the same as the program steps of program (stored on a computer-readable medium)

of claim 11. Therefore, the program steps of claim 11 are rejected for the same reasons as stated

in the rejection of the method steps in claim 6.

Regarding claim 10, which depends from claim 7, Toda further teaches that **object**

classification table includes at least one among items of number of text lines, number of

bitmap data, number of arcs, number of squares, number of straight lines, number of

curves (Toda teaches the classification table [example given in Figs. 3A 3B 5A 5B show the

numbers associated with squares [example 3011], straight lines [3012], text [3014] and other

items, so Toda teaches the number of squares [examples 5026 number of square, 5021 number of

square, 5025 number of square] thus numbers of squares).

Regarding claim 9, which depends from claim 8, in the combination of Toda and McIntyre, the object classification table of Toda includes the number of squares and the like (see rejection of claim 10), and thus, in order to most properly analyze the data to select the most appropriate PDL, it would have been obvious to one of ordinary skill in the art that the PDL decision table of McIntyre would need to be edited to include such information. The motivation for doing so would have been to most correctly analyze the incoming print data in the selection of a PDL.

4.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda and McIntyre as applied to claims 7 and 11 above, and further in view of Isoda (US 6249835).

Regarding claim 12, which depends from claim 11, while in the combination of Toda and McIntyre a most appropriate print data output based the current up-to-date version information of printer software, the combination does not specifically teach that the most up-to-date version of the printer software corresponds to the **type of printer** itself.

Isoda teaches preparing print data for output (rasterizing) based on the type of printer that will print the data (Fig. 8 shows the printers with associated rasterizing level for that type of printer; col. 5 lines 5-10).

It would have been obvious to one of ordinary skill in the art that the type of printer would play a roll in the preparing print data for it as taught in Isoda. The motivation for doing so would be to prepare the most correct print data to output the most correct print sheet. In the combined system of Toda, McIntyre, and Isoda, the system would use the type of printer as added to the comparison in selecting an appropriate PDL for preparing print data.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

>   US-5926185, Vyncke et al., 7-20-1999 : teaches a method for processing a set of page
>
>   description language commands to reduce complexity including an object display list.
>
>   US-6801330, Klosterman et al., 10-5-2004: teaches selecting a page description language
>
>   for a printer driver.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The

examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine

KING Y. POON
PRIMARY EXAMINER

Examiner
Art Unit 2624

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